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NOMENCLATURAL PROPOSAL PHYTOSOCIOLOGICAL NOMENCLATURE

Request (4) and Proposal (28): to conserve the name *Molinio arundinaceae-Quercetum roboris* Neuhäusl et Neuhäuslová-Novotná 1967

Michal Slezák[1], Ján Kliment[2], Milan Valachovič[3]

1 *Institute of Forest Ecology, Slovak Academy of Sciences, Zvolen, Slovakia*
2 *Botanical Garden of Comenius University, Blatnica, Slovakia*
3 *Institute of Botany, Plant Science and Biodiversity Center, Slovak Academy of Sciences, Bratislava, Slovakia*

Corresponding author: Michal Slezák (slezak.miso@gmail.com)

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Abstract

We propose (i) to select *Quercus robur* as the name-giving taxon of the associations *Molinio arundinaceae-Quercetum* Samek 1962 and *Molinio arundinaceae-Quercetum* Neuhäusl et Neuhäuslová-Novotná 1967 and (ii) to conserve the younger name *Molinio arundinaceae-Quercetum roboris* Neuhäusl et Neuhäuslová-Novotná 1967, representing hygrophytic Central European acidophilous oak forests (*Quercion roboris* alliance).

(28) *Molinio arundinaceae-Quercetum* Neuhäusl et Neuhäuslová-Novotná 1967: 17–23, table 2.

Typus: Neuhäusl and Neuhäuslová-Novotná (1967), table 2, rel. 11 (lectotypus; Pallas 1996: 51).

(H) *Molinio arundinaceae-Quercetum* Samek 1962: 134–135, table V on p. 156–160.

Typus: Samek (1962), Table V, rel. 28 (lectotypus; Moravec 1998: 33).

Taxonomic reference: Marhold et al. (1998).

Abbreviations: ICPN = International Code of Phytosociological Nomenclature.

Keywords

conserved name, phytosociological nomenclature, *Quercion roboris*, syntaxonomy, vegetation classification

Introduction

This proposal deals with hygrophytic Central European acidophilous oak forests. They are characterized by a dominance of *Quercus robur* agg. in the tree layer and the presence of *Frangula alnus* in the well-developed shrub layer. In addition to acidophilous and acidic-tolerant species, their herb layer contains primarily species indicating seasonal fluctuations in the groundwater table (e.g., *Deschampsia cespitosa*, *Molinia caerulea* agg., *Potentilla erecta*), accompanied by indicators of air humidity (mainly ferns). These stands usually inhabit wet flatlands with poorly drained soils or wet terrain depressions (Slezák et al. 2020).

In accordance with the published syntaxonomic revision of acidophytic oak forests in Slovakia (Slezák et al. 2020), we propose to conserve the association name *Molinio arundinaceae-Quercetum* Neuhäusl et Neuhäuslová-Novotná 1967. The idea for conserving this name was originally recommended by Jens Pallas

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(Münster, Germany) as a possible solution to nomenclatural questions and the syntaxonomic interpretation of hygrophytic acidophilous oak forests in the eastern part of Central Europe. Some authors have recently classified these stands into the broadly defined association *Holco mollis-Quercetum roboris* Scamoni 1935, but its protologue (Scamoni 1935) and neotype-relevé (Pallas 1996) do not fully correspond to a periodically wet acidophilous oak forests with a dominance of *Molinia* species.

Nomenclatural discussion

In a vegetation study of the Brdské hřebeny Mts (Czech Republic), Samek (1962) described the new association '*Molinio-Quercetum*'. He applied this name for oak forests with species adapted to an intermittent moisture regime (i.e., species of *Molinia* meadows) and a constant occurrence of some acidophytes. Since all three relevés in the phytosociological table include only *Molinia arundinacea*, Moravec (1998) added the species epithet according to Recommendation 10C of the ICPN and wrote the name as '*Molinio arundinaceae-Quercetum* Samek 1962'.

Neuhäusl and Neuhäuslová-Novotná (1967) described hygrophytic acidophilous oak forests dominated by *Molinia* species under the identical name *Molinio arundinaceae-Quercetum*, without reference to Samek. However, in both original diagnoses of the association name, the name-giving *Quercus* species was not indicated by the authors of the name. Therefore, a binding decision (Art. 40b of ICPN) is required for selecting the name-giving taxa.

Samek (1962) used a "double form" of the oak species name *Quercus robur-sessilis* in the phytosociological Table V (pages 156–160). It seems that the author did not distinguish the two oak species present in the relevés, i.e., *Q. robur* vs. *Q. sessilis* (synonym of *Q. petraea*). However, we assume that the first position of the oak species name "*robur*" indicates the dominant and/or typical oak species of the tree layer for this association, because in the Samek study, the oak species name *Quercus sessilis-robur* is reported, for example, in the case of the *Luzulo-Carpinetum* association (Table II, pages 146–149). We therefore propose *Q. robur* as the name-giving taxon of the association *Molinio arundinaceae-Quercetum* Samek 1962.

Neuhäusl and Neuhäuslová-Novotná (1967) published this association name based on 33 phytosociological relevés (in table 2) collected in the Czech Republic. It is clear from the author's description of the species composition that the forest overstory of well-developed hygrophytic stands consists mainly of the species *Q. robur* (present in 28 relevés), while *Q. petraea* is less common and reaches higher percentage values only on drier sites. Thus, we propose to select *Q. robur* as the name-giving taxon for the association *Molinio arundinaceae-Quercetum* Neuhäusl et Neuhäuslová-Novotná 1967.

The authors (Samek 1962; Neuhäusl and Neuhäuslová-Novotná 1967) did not typify the association name at that time. The lectotype of the *Molinio arundinaceae-Quercetum* Samek 1962 designated by Moravec (1998) actually corresponds to a thermophilous oak forest on acidic substrates belonging to the *Melico pictae-Quercetum roboris* (*Quercion petraeae* alliance; Roleček 2013). The other two relevés of the Samek protologue are not oak-dominated forests, as *Quercus* has a very low cover or is completely absent. Moreover, there are also many more forest mesophytes (e.g., *Ajuga reptans*, *Anemone nemorosa*, *Melica nutans*, *Viola reichenbachiana*) and nutrient-demanding species (e.g., *Scorzonera humilis*) in the published relevés compared to the study of Neuhäusl and Neuhäuslová-Novotná (1967). On the other hand, lectotypification of the *Molinio arundinaceae-Quercetum* Neuhäusl et Neuhäuslová-Novotná 1967 carried out by Pallas (1996) follows the original concept of Neuhäusl and Neuhäuslová-Novotná (1967), and the type-relevé unambiguously represents a hygrophytic acidophilous oak forest. The name was adopted and traditionally used in this sense in various Central European countries (e.g., Wallnöfer et al. 1993; Moravec 1998; Pallas 2003; Jarolímek et al. 2008; Matuszkiewicz 2012).

If our proposal for a binding decision of the name-giving taxa will be accepted, the name *Molinio arundinaceae-Quercetum roboris* Neuhäusl et Neuhäuslová-Novotná 1967 becomes a later homonym. To promote nomenclatural stability and maintenance of the well-known and long-used association name, we therefore propose to conserve the name *Molinio arundinaceae-Quercetum roboris* Neuhäusl et Neuhäuslová-Novotná 1967 against the older name *Molinio arundinaceae-Quercetum roboris* Samek 1962.

Author contributions

MS led the writing, but all authors contributed to the nomenclatural research and revision of the manuscript.

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References

Jarolímek I, Šibík J, Hegedüšová K, Janišová M, Kliment J, Kučera P, Májeková J, Michálková D, Sadloňová J, …, Zaliberová M (2008) A list of vegetation units of Slovakia. In: Jarolímek I, Šibík J (Eds) Diagnostic, constant and dominant species of the higher vegetation units of Slovakia. Veda, Bratislava, 295–329.

Marhold K, Goliašová K, Hegedüšová Z, Hodálová I, Jurkovičová V, Kmeťová E, Letz R, Michálková E, Mráz P, …, Ťavoda O (1998) Ferns and flowering plants. In: Marhold K, Hindák F (Eds) Checklist of non-vascular and vascular plants of Slovakia. Veda, Bratislava, 333–687.

Matuszkiewicz W (2012) Przewodnik do oznaczania zbiorowisk roślinnych Polski [Guidebook for determination of plant communities in Poland]. Wydawnictwo Naukowe PWN, Warszawa, 537 pp. [in Polish]

Moravec J (1998) Přehled vegetace České republiky. Svazek 1 Acidofiné doubravy [Acidophilous oak forests]. Academia, Praha, 64 pp. [in Czech]

Neuhäusl R, Neuhäuslová-Novotná Z (1967) Syntaxonomische Revision der azidophilen Eichen- und Eichenmischwälder im westlichen Teile der Tschechoslowakei. Folia Geobotanica et Phytotaxonomica 2: 1–41. https://doi.org/10.1007/BF02851753

Pallas J (1996) Beitrag zur Syntaxonomie und Nomenklatur der bodensauren Eichenmischwälder in Mitteleuropa. Phytocoenologia 26: 1–79. https://doi.org/10.1127/phyto/26/1996/1

Pallas J (2003) *Quercetea robori-petraeae* Braun-Blanquet et Tüxen 1943. In: Bohn U, Neuhäusl R, Gollub G, Hettwer C, Neuhäuslová Z, Raus T, Schlüter H, Weber H (Eds) Karte der natürlichen Vegetation Europas / Map of the natural vegetation of Europe. Maß-stab / Scale 1: 2 500 000. Erläuterungstext / Explanatory Text. Landwirtschaftsverlag, Münster, 251–270.

Roleček J (2013) Acidofilní doubravy (*Quercetea robori-petraeae*) [Acidophilous oak forests]. In: Chytrý M (Ed.) Vegetace České republiky. 4. Lesní a křovinná vegetace. Academia, Praha, 347–365. [in Czech]

Samek V (1962) Lesy severovýchodního výběžku Brdských hřebenů [Forest of northeastern foothills of the Brdské hřebene Mts.]. Práce Výzkumných Ústavů Lesnických ČSSR 24: 107–168. [in Czech]

Scamoni A (1935) Vegetationsstudien im Sarnow. Zeitschrift für Forst- und Jagdwesen 11–12: 561–600, 625–648.

Slezák M, Valachovič M, Blanár D, Máliš F, Senko D, Žarnovičan H (2020) Vegetation classification of acidophilous oak forests in Slovakia. Tuexenia 40: 33–52.

Wallnöfer S, Mucina L, Grass V (1993) *Querco-Fagetea*. In: Mucina L, Grabherr G, Wallnöfer S (Eds) Die Pflanzengesellschaften Österreichs, Teil III: Wälder und Gebüsche, Gustav Fischer Verlag, Jena, 85–236.

E-mail and ORCID

Michal Slezák (Corresponding author, slezak.miso@gmail.com), ORCID: https://orcid.org/0000-0002-6926-7139
Ján Kliment (kliment@rec.uniba.sk)
Milan Valachovič (milan.valachovic@savba.sk)